

FRAMING PLAN

LEGEND

I and I' are the moment of inertia and composite moment of inertia of the beam section.

S_b and S_b' are the non-composite and composite section modulus for the bottom fiber of the prestressed beam.

S_t and S_t' are the non-composite and composite section modulus for the top fiber of the prestressed beam.

$M @$ is the moment due to dead loads on the non-composite prestressed beam. It is conservatively calculated at 0.5 of the span.

$M_s @$ is the moment due to dead loads on the composite section.

$M \underline{L}$ is the moment due to live load on the composite section.

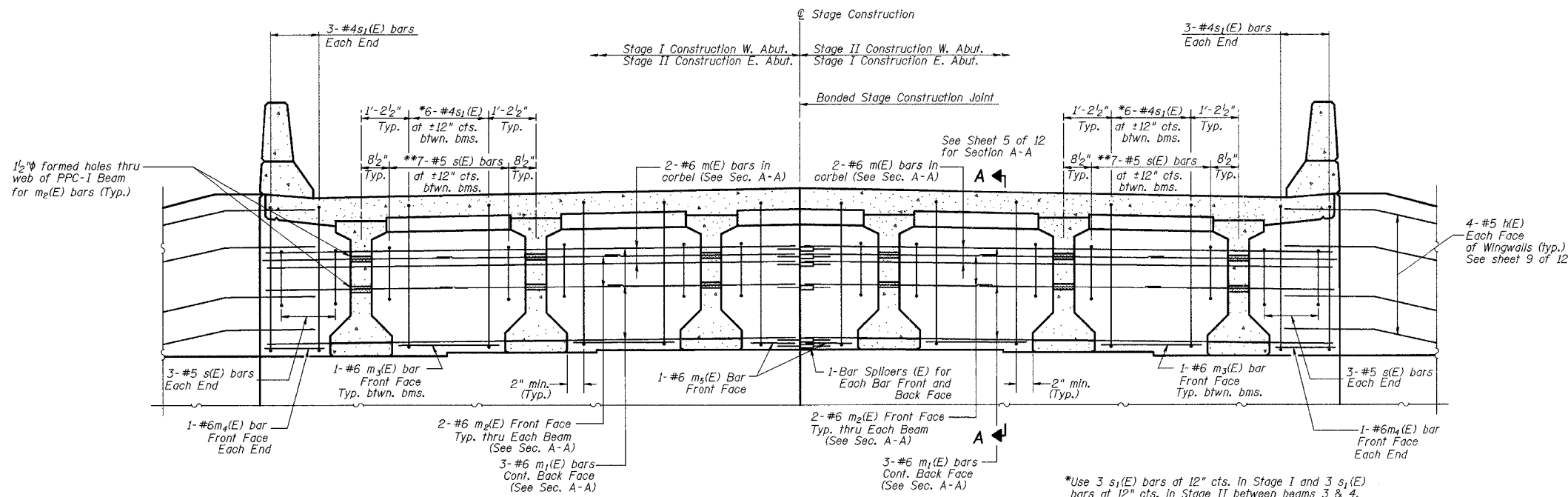
$M (Imp)$ is the moment due to live load impact on the composite section.

INTERIOR BEAM MOMENT TABLE

	0.5 Span	
I	(in ⁴)	48,648
I'	(in ⁴)	175,542
S_b	(in ³)	3,165
S_b'	(in ³)	5,914
S_t	(in ³)	2,358
S_t'	(in ³)	27,776
$@$	(k/')	1,080
$M @$	(k)	357
$s @$	(k/')	0.504
$M_s @$	(k)	166
$M \underline{L}$	(k)	448
$M (Imp)$	(k)	126

INTERIOR BEAM REACTION TABLE

	Abut.	
$R @$	(k)	27.8
$R_s @$	(k)	13.0
$R \underline{L}$	(k)	39.8
$Imp.$	(k)	11.2
$R (Total)$	(k)	91.8



DIAPHRAGM ELEVATION AT ABUTMENTS

(Looking West at W. Abut.)
(Looking East at E. Abut.)

MIN BAR LAP

#6 bars = 2'-9"

NOTES:

Reinforcement bars in diaphragm are billed with superstructure on sheet 6 of 12.

Concrete in diaphragm is included with Concrete Superstructure on sheet 6 of 12.

For details of bar $s(E)$ and $s_1(E)$ see sheet 6 of 12.

The $s(E)$ and $s_1(E)$ bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

See sheet 5 of 12 for Section A-A.

ILLINOIS DEPARTMENT OF TRANSPORTATION
FRAMING PLAN & DIAPHRAGM DETAILS
ILLINOIS ROUTE 33 OVER
BISHOP CREEK
F.A.P. RTE. 95
SECTION 6B-1
EFFINGHAM COUNTY
Sta. 531+80
STRUCTURE NUMBER 025-0097

DATE: APR. 2002

DRAWN BY: BDM
CHECKED BY: SJK